ABSTRACT

A linear MISFET is resilient, flexible and capable of being fabricated into an integrated circuit in an arbitrary shape. Typically a structure includes a source region and drain region arranged in parallel. However, since a channel length of the MISFET for determining the electric characteristics thereof is determined by a distance between the source region and the drain region across a cylindrical gate insulating region, it has been difficult to downsize the channel length or improve reproducibility thereof. The present MISFET includes a semiconductor region serving as a channel region interposed between a source region(s) and a drain. Application of control voltage to the semiconductor region through the gate insulating region, controls electric current flowing between the source regions and drain region(s). The channel length is determined by a film thickness of the semiconductor region, thereby enabling downsizing and improvement of reproducibility, of the channel length.